Addendum to the Preliminary Geotechnical Report (October 2015)

Centennial Corridor Project

Project ID: 0600000484
SCH ID: 2008091102

PURPOSE OF THE TECHNICAL MEMORANDUM

This Addendum to the Preliminary Geotechnical Report was prepared after circulation of the Draft Environmental Impact Report/Environmental Impact Statement (DEIR/EIS) for the Centennial Corridor Project (May 2014) to address changes in, or pertaining to, any of the following: comments received; design refinements; regulatory setting; affected environment; environmental consequences; or avoidance, minimization, and mitigation measures.

CHANGE IN PROJECT DESIGN

Many public comments on the DEIR/EIS requested that design modifications be incorporated into the proposed project. The following refinements provide benefits or otherwise improve the project, and they do not result in additional or new impacts not previously described and analyzed in the DEIR/EIS.

Kaiser Realignment

During the public circulation period of the draft environmental document, Caltrans and the city of Bakersfield received a letter on behalf of Kaiser Foundation Health Plan, Inc. (Kaiser), dated July 7, 2014, describing various concerns in regard to the proposed Centennial Corridor Project. Due to these concerns, preliminary design plans for Alternative B were modified to avoid direct impacts to the Kaiser Health Care Center. The preliminary design revisions that would avoid impacts on the Kaiser medical offices are depicted in Attachment 1 of this Addendum. These revisions would significantly increase the distances between the Kaiser facility and the project improvements, creating an 80-foot buffer between the medical facility's parking lot and the proposed alignment. No obstructions associated with the Centennial Corridor Project will block Kaiser Health Care Center driveways, and no modifications would be made to change the configuration of the existing driveways. In addition, the modified design will not require property or temporary construction easements on Kaiser's property.

Additionally, as a response to Kaiser's comments on the draft environmental document, additional noise mitigation measures may be incorporated by Caltrans and the construction contractor if they are deemed practicable and reasonable. These additional construction abatement measures include the use of temporary noise barriers, outdoor sound curtains or sound

curtain noise barriers. These measures typically reduce equipment noise levels from 15 to 22 dBA.

Air Quality

To address localized increases in particulate matter along the Preferred Alternative B alignment, Caltrans has entered into a Voluntary Emission Reduction Agreement with the San Joaquin Valley Air Pollution Control District to provide betterments to local air quality within the project area. This agreement would provide additional localized particulate matter reductions. See Appendix L of the final environmental document for more details on the Voluntary Emission Reduction Agreement.

The San Joaquin Valley Air Pollution Control District's Voluntary Emissions Reduction Program is a grant/incentive program. The $1.5 million dollars provided by Caltrans to the San Joaquin Valley Air Pollution Control District to fund this Voluntary Emission Reduction Agreement will be used to award funds to businesses, residents, and municipalities to generate real and quantifiable reductions in emissions for the Bakersfield area and the Central Valley. Participation by Bakersfield residents is voluntary and is available to residents living within a certain distance of the project alignment. The following are some examples of how these funds may be utilized to reduce air pollution:

- Grants to residents to purchase cleaner vehicles through the San Joaquin Valley Air Pollution Control District's Drive Clean Rebate Program.
- Grants to residents through the San Joaquin Valley Air Pollution Control District's Tune-In Tune-Up program to repair older high-polluting vehicles.
- Grants to residents to replace fireplaces and noncertified wood-burning stoves with clean-burning U.S. Environmental Protection Agency-certified units through the District's Burn Cleaner Incentive Program.
- Grants to convert electricity or replace existing diesel-powered off-road equipment through the San Joaquin Valley Air Pollution Control District's Heavy-Duty Engine Program.
- Grants to replace old trucks with new low-emissions trucks through the San Joaquin Valley Air Pollution Control District's Truck Voucher Program.

- Grants to replace older and high-polluting school buses through the San Joaquin Valley Air Pollution Control District's School Bus Replacement Program. This would be provided for buses that operate within the Preferred Alternative B alignment.

- Grants to upgrade heating, ventilation, air conditioning (HVAC) systems to qualifying daycare centers, preschools, and schools, to provide improvements to reduce indoor air particles related to negative health effects such as exacerbating the symptoms of asthma.

The emissions reductions secured through Voluntary Emission Reduction Agreements are supplementary to existing regulations, achieving reductions earlier or beyond those required by regulations. Over the years, the San Joaquin Valley Air Pollution Control District has built a reputation for excellence in the implementation of these programs, as highlighted in multiple audits by state agencies that lauded the San Joaquin Valley Air Pollution Control District's incentive programs for their efficiency and effectiveness. Historically, the San Joaquin Valley Air Pollution Control District's incentive programs have invested over $1 billion in public and private funding for clean air projects by reducing more than 100,000 tons of emissions. With the programs listed above offered to residents near the project alignment, reduction in construction emissions within the project area would be reduced by the following in three years:

- Year 1 – 1.9 tons of reactive organic gas/33.6 tons of nitrogen oxide/7.6 tons of coarse particulate matter (PM_{10})

- Year 2 – 1.45 tons of reactive organic gas/16.5 tons of nitrogen oxide/7.3 tons of coarse particulate matter (PM_{10})

- Year 3 – 0.4 ton of reactive organic gas/2.55 tons of nitrogen oxide/0.7 tons of coarse particulate matter (PM_{10})

It should be noted that the reductions mentioned above would be implemented mainly within the Year 1 timeframe, and the reductions will carry over to future years, well beyond the construction years.

With implementation of the Voluntary Emission Reduction Agreement programs listed above, the project area will experience operational emission reductions of:

- 5 tons of reactive organic gas

- 73 tons of nitrogen oxide

- 5 tons of coarse particulate matter (PM_{10})

These emission reductions will be achieved throughout the 20-year design life of the project.

In addition to the Voluntary Emission Reduction Agreement, the Centennial Corridor Project would provide a one-time $200,000 grant to a non-profit organization to plant trees along the Preferred Alternative B alignment. This organization may plant trees at the resident's property. Initially, trees will be offered to environmental justice communities living within 1,000 feet of either side of the new freeway (first priority), and secondly, properties within 500 feet of each side of the Alternative B alignment. If trees are available after the primary and secondary targeted areas, trees would be offered to property owners within 1,500 feet of each side of the alignment. If trees are still available, they may be planted at other locations in consultation with and approved by the city of Bakersfield. Planting and maintenance of the trees would be the responsibility of those accepting the trees.

The Voluntary Emission Reduction Agreement is provided in Appendix L of the final environmental document.

Carrier Canal Crossing

To address concerns regarding bicycle and pedestrian connectivity, preliminary design plans for Alternative B were revised to include a multi-use pathway that will run parallel to the project alignment connecting bicyclists and pedestrians from California Avenue to Commerce Drive. The decision to incorporate a multi-use pathway to accommodate a bicycle and pedestrian connection was made in response to public comments requesting a bicycle connection spanning over the Carrier Canal. As part of this change, an approximately 100-foot-long-bridge over the Carrier Canal would be constructed to accommodate bicycles and pedestrians. The bridge would be of sufficient width to accommodate two-way pedestrian and bicycle traffic. The preliminary design layout for the Carrier Canal Crossing is included in Attachment 2 of this Addendum. The proposed modification is located within the study area analyzed in the draft environmental document and supporting technical studies. This multi-use pathway and bridge structure will provide direct connectivity to the Kern River Parkway Bike Trail for its users.

Pacific Gas and Electric Towers

The Preferred Alternative B alignment originally proposed to relocate six Pacific Gas and Electric transmission towers within the general area of Truxtun Avenue/Westside Parkway; however, after circulation of the environmental document the relocation of these towers was identified as a project activity in the previously approved *Final Westside Parkway*

Environmental Assessment/Environmental Impact Report (2007) to accommodate the construction of the Westside Parkway Project. The relocation of the Pacific Gas and Electric transmission towers were not relocated to their ultimate location as stated in the city of Bakersfield's General Plan. These tower relocations would be coordinated with Pacific Gas and Electric in compliance with applicable Public Utilities Commission regulations.

Joseph Drive Pedestrian Sidewalk

Implementation of the Centennial Corridor Project will result in the permanent closure of 11 local streets, which in some cases greatly lengthens the routes for current pedestrian routes in the Westpark neighborhood. The city will coordinate with Caltrans to install a dedicated new pedestrian sidewalk for the benefit of residents living in homes south of La Mirada Drive and Joseph Drive. The pedestrian sidewalk would enhance connectivity to newly divided areas in the Westpark neighborhood and shorten the route for pedestrians to access popular community facilities located on either side of the freeway, including Centennial Park, Harris Elementary school, and other neighborhood destinations. This proposed feature would upgrade bicyclist and pedestrian access via La Mirada Drive. The preliminary design layout for the Joseph Drive pedestrian crosswalk is included in Attachment 3 of this Addendum.

CHANGE IN REGULATORY SETTING

No changes to environmental regulations related to geology/soils/seismic/topography have occurred since circulation of the DEIR/EIS in May 2014.

CHANGE IN AFFECTED ENVIRONMENT

A full description of the environmental setting was provided in the Preliminary Geotechnical Report (revised May 2012). No changes to the environmental setting related to geology/soils/ seismic/topography of the project study area have occurred since preparation of that report or circulation of the DEIR/EIS in May 2014.

CHANGE IN ENVIRONMENTAL CONSEQUENCES

No substantial changes in geology/soils/seismic/topography impacts will occur as a result of the design modifications. Grading will not affect any designated natural landmarks because there are no officially designated natural landmarks or other major geological features within the project area. In addition, the California Geological Survey has not found seismic hazards (including liquefaction and landslides due to earthquake) in the project area. Analysis performed for the project concluded that liquefaction is unlikely; however, foundations supporting bridges will be designed to withstand the effects of soil liquefaction consistent with Caltrans design

specifications. Using Caltrans seismic design procedures will ensure the structural integrity of bridges and reduce hazards to the traveling public during a major earthquake in the region.

Though soils have the potential to cave, standard construction practices will protect the construction crew from the collapse of slopes within excavation areas and trenches. This will apply for all areas where trenching is required.

Therefore, the analysis conducted; findings and conclusions; and recommendations included in the Preliminary Geotechnical Report are still valid with inclusion of the project design modifications.

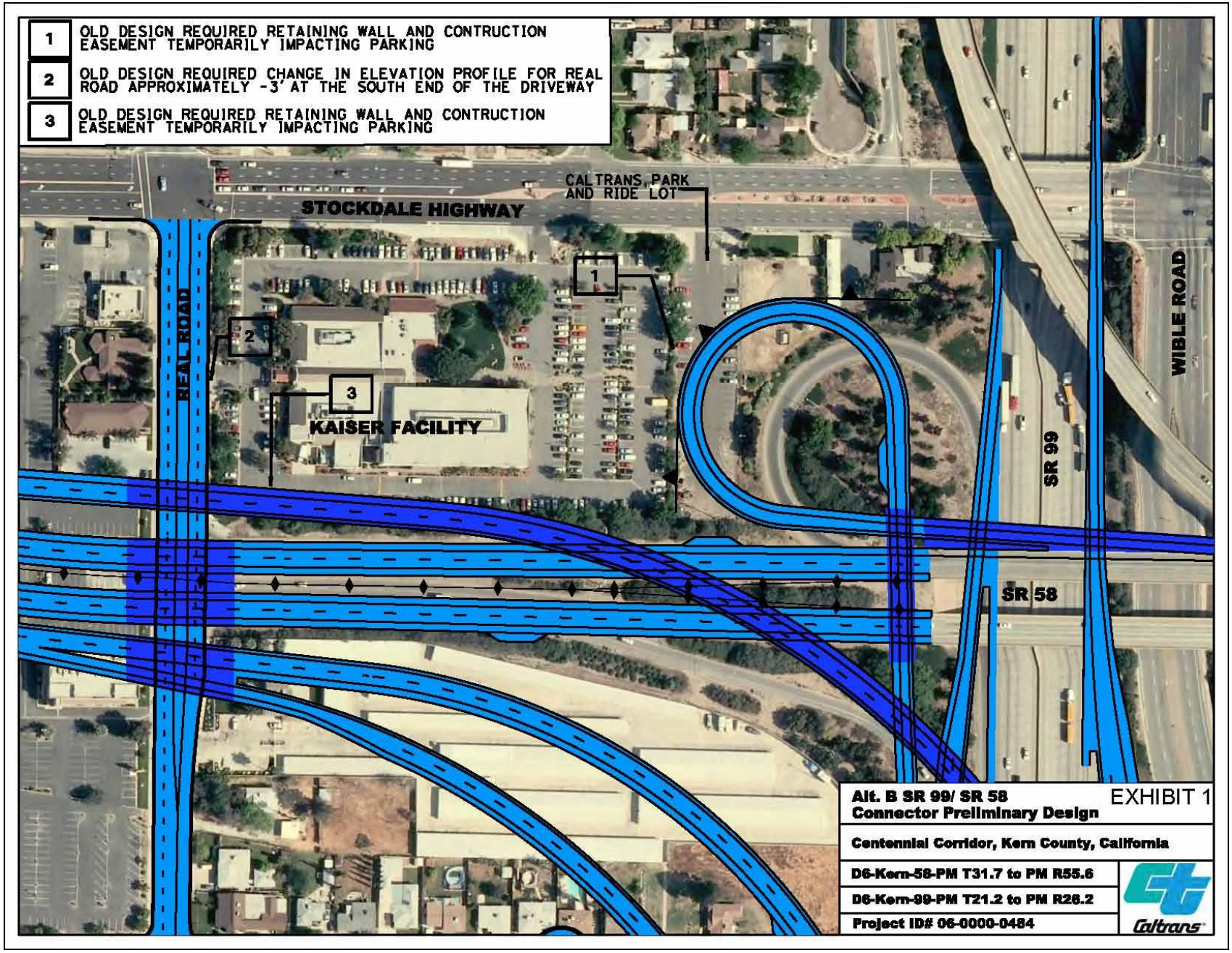
CHANGE TO AVOIDANCE, MINIMIZATION, AND MITIGATION MEASURES

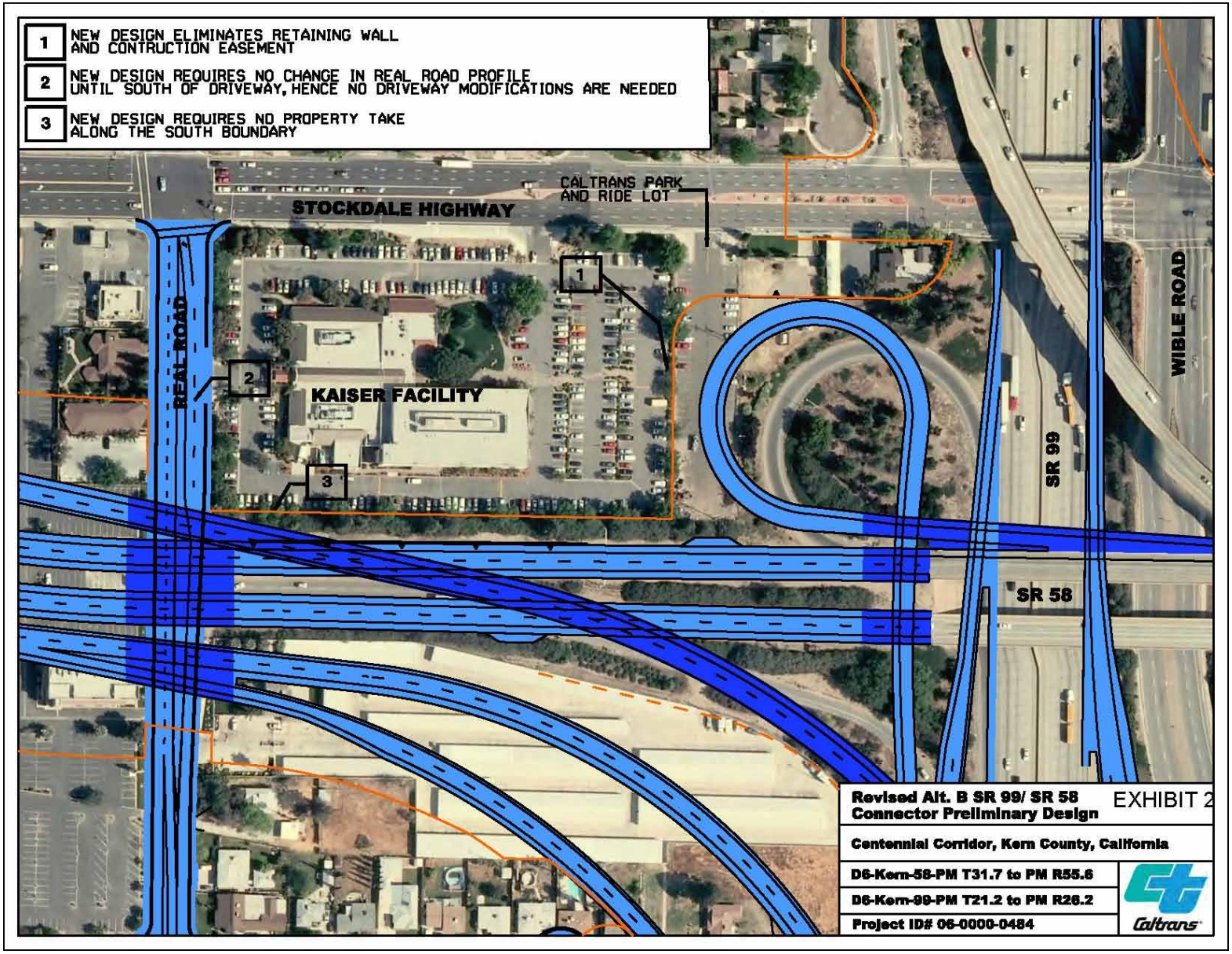
No changes to avoidance, minimization, or mitigation measures pertaining to geology/soils/ seismic/topography impacts have occurred since circulation of the May 2014 DEIR/EIS. The project will be designed to minimize geotechnical impacts. Because there will be no geotechnical impacts using standard design practices, no mitigation measures are required.

PREPARER/REVIEWER

Daniel Wagner, Professional Engineer, Senior Engineer. Bachelor of Science, Civil Engineering, San Diego State University; 10 years of roadway design, drainage design, and project management experience. Contribution: Preparation of Addendum to Preliminary Geotechnical Report.

Attachment 1
Kaiser Realignment


1 OLD DESIGN REQUIRED RETAINING WALL AND CONTRUCTION EASEMENT TEMPORARILY IMPACTING PARKING
2 OLD DESIGN REQUIRED CHANGE IN ELEVATION PROFILE FOR REAL ROAD APPROXIMATELY -3' AT THE SOUTH END OF THE DRIVEWAY
3 OLD DESIGN REQUIRED RETAINING WALL AND CONTRUCTION EASEMENT TEMPORARILY IMPACTING PARKING
CALTRANS PARK AND RIDE LOT
STOCKDALE HIGHWAY
REAL ROAD
KAISER FACILITY
WIBLE ROAD
SR 99
SR 58
Alt. B SR 99/ SR 58 Connector Preliminary Design
EXHIBIT 1
Centennial Corridor, Kern County, California
D6-Kern-58-PM T31.7 to PM R55.6
D6-Kern-99-PM T21.2 to PM R26.2
Project ID# 06-0000-0484
Caltrans


1 NEW DESIGN ELIMINATES RETAINING WALL AND CONTRUCTION EASEMENT
2 NEW DESIGN REQUIRES NO CHANGE IN REAL ROAD PROFILE UNTIL SOUTH OF DRIVEWAY, HENCE NO DRIVEWAY MODIFICATIONS ARE NEEDED
3 NEW DESIGN REQUIRES NO PROPERTY TAKE ALONG THE SOUTH BOUNDARY
STOCKDALE HIGHWAY
CALTRANS PARK AND RIDE LOT
REAL ROAD
KAISER FACILITY
WIBLE ROAD
SR 99
SR 58
Revised Alt. B SR 99/ SR 58 Connector Preliminary Design
EXHIBIT 2
Centennial Corridor, Kern County, California
D6-Kern-58-PM T31.7 to PM R55.6
D6-Kern-99-PM T21.2 to PM R26.2
Project ID# 06-0000-0484
Caltrans

Attachment 2
Carrier Canal Crossing Design Modification

LEGEND

- EXISTING RIGHT OF WAY
- CENTENNIAL RIGHT OF WAY
- PROPOSED ROADWAY
- PROPOSED BIKE PATH
- RETAINING WALL
- PROPOSED BUILDING IMPACTS
- PROPOSED PARTIAL BUILDING IMPACTS

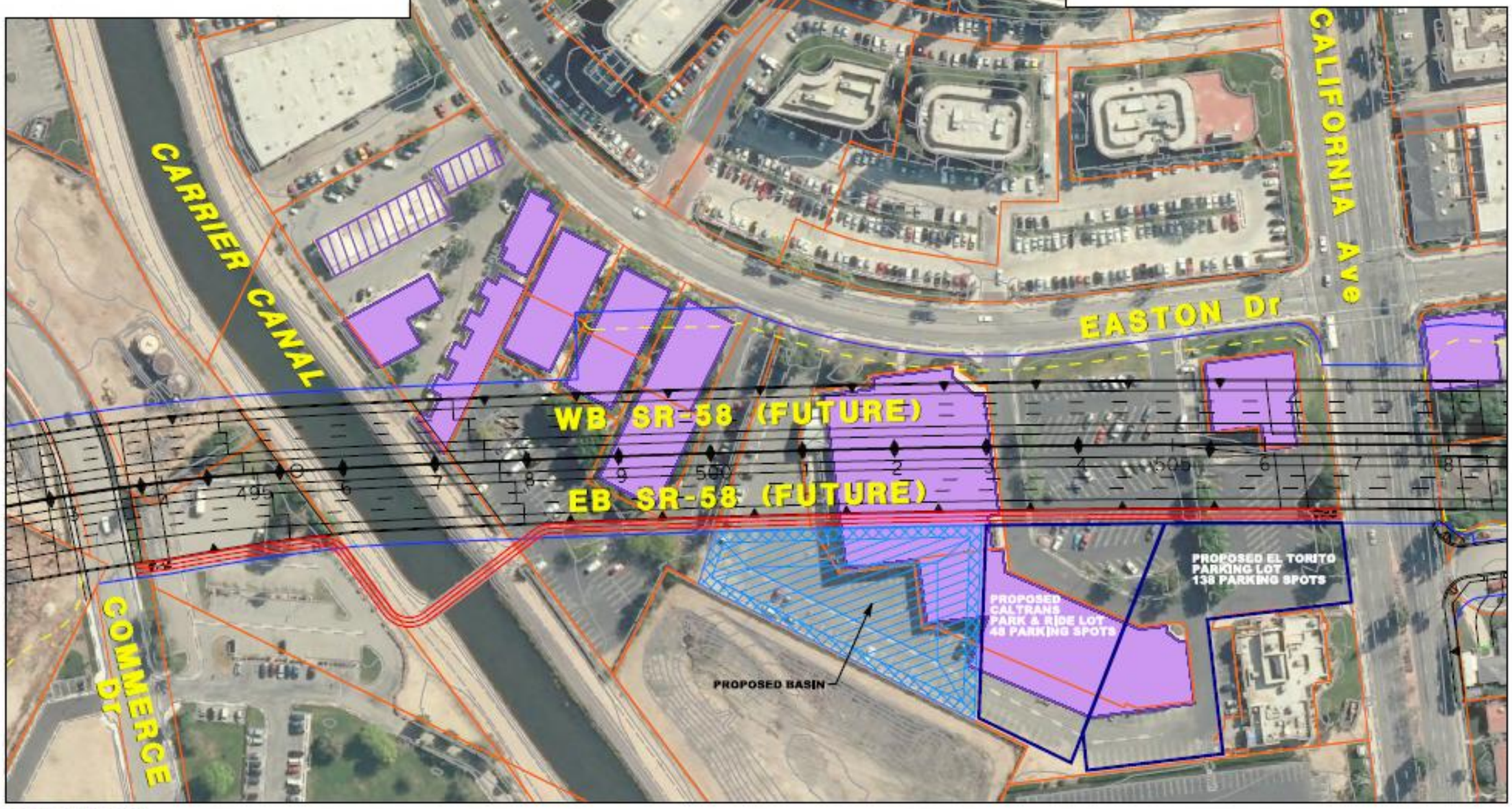
PARSONS

CENTENNIAL CORRIDOR

EASTON DR

APRIL 10, 2015

SCALE: 1" = 100'



Attachment 3
Joseph Drive Pedestrian Crossing

RIGHT-OF-WAY REQUIREMENTS

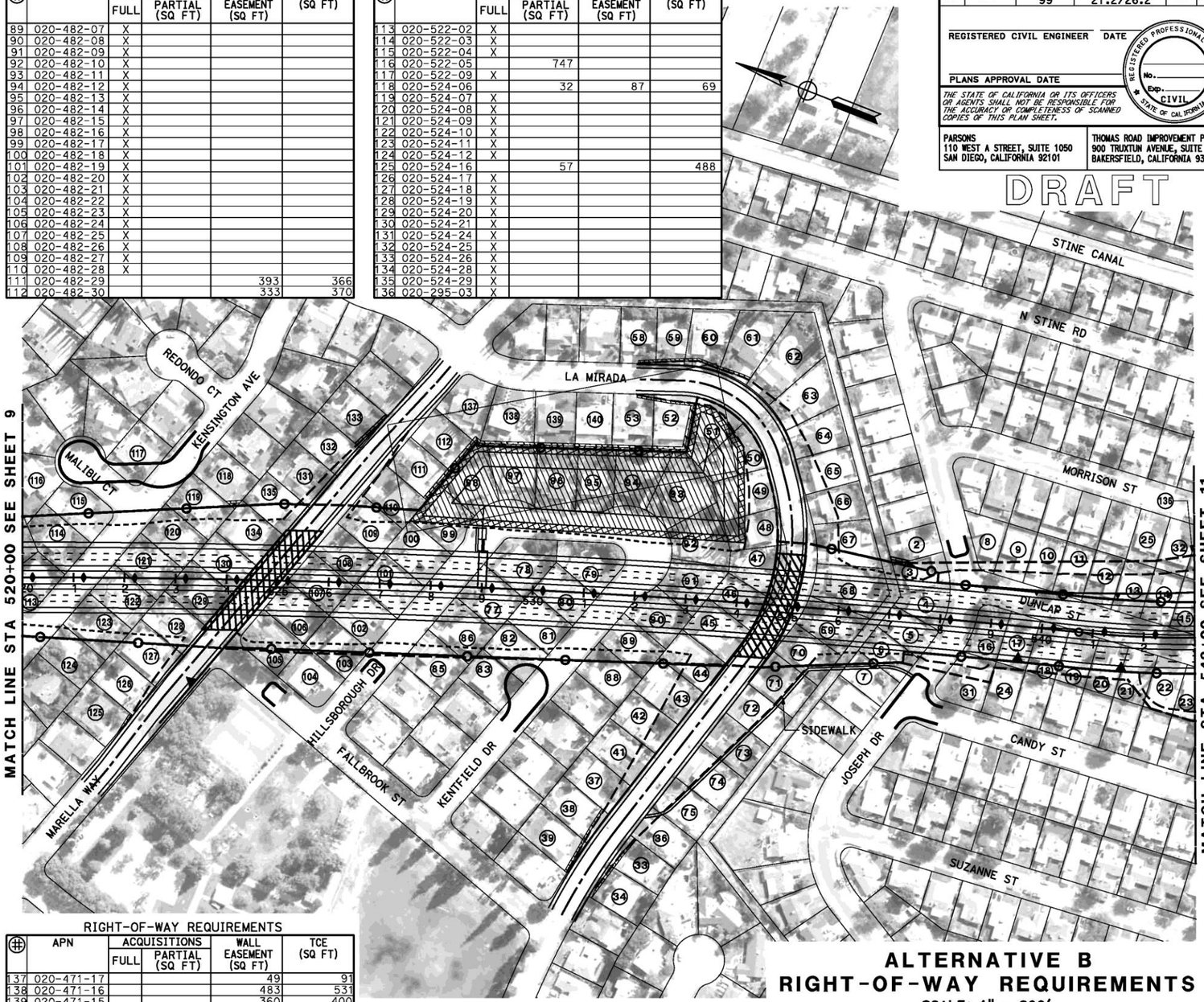
#	APN	ACQUISITIONS FULL	ACQUISITIONS PARTIAL (SQ FT)	WALL EASEMENT (SQ FT)	TCE (SQ FT)
1	NOT USED				
2	020-261-02		35	101	162
3	020-261-03	X			
4	020-261-04	X			
5	020-261-05	X			
6	020-261-06	X			
7	020-261-07	X			
8	020-262-01		78		
9	020-262-02	X			
10	020-262-03	X			
11	020-262-04	X			
12	020-262-05	X			
13	020-262-06	X			
14	020-262-07	X			
15	020-262-08	X			
16	020-265-01	X			
17	020-265-02	X			
18	020-265-03	X			
19	020-265-04	X			
20	020-265-05	X			
21	020-265-06	X			
22	020-265-07	X			
23	020-265-08	X			
24	020-265-21	X			
25	020-295-01		322		
26	NOT USED				
27	NOT USED				
28	NOT USED				
29	NOT USED				
30	NOT USED				
31	020-265-22	X			
32	020-295-02	X			
33	020-351-52		551		354
34	020-351-53		347		314
35	NOT USED				
36	020-351-55	X			
37	020-352-01	X			
38	020-352-02		590		354
39	020-352-03		198		356
40	NOT USED				
41	020-471-01	X			
42	020-471-02	X			
43	020-471-03	X			
44	020-471-04	X			
45	020-741-05	X			
46	020-471-06	X			
47	020-471-07	X			
48	020-471-08	X			
49	020-471-09	X			
50	020-471-10	X			
51	020-471-11	X			
52	020-471-12		919	694	1136
53	020-471-13		167	400	477
54	NOT USED				
55	NOT USED				
56	NOT USED				
57	NOT USED				
58	020-474-04		74		171
59	020-474-05		325		283
60	020-474-06		785		366
61	020-474-07		1109		327
62	020-474-08	X			
63	020-474-09	X			
64	020-474-10	X			
65	020-474-11	X			
66	020-474-12	X			
67	020-474-13	X			
68	020-474-14	X			
69	020-474-15	X			
70	020-474-16	X			
71	020-474-17	X			
72	020-474-18	X			
73	020-474-19	X			
74	020-474-23	X			
75	020-474-24	X			
76	NOT USED	X			
77	020-481-05	X			
78	020-481-06	X			
79	020-481-07	X			
80	020-481-08	X			
81	020-481-09	X			
82	020-481-10	X			
83	020-481-11	X			
84	NOT USED				
85	020-481-15	X			
86	020-481-16	X			
87	NOT USED				
88	020-482-06	X			

RIGHT-OF-WAY REQUIREMENTS

#	APN	ACQUISITIONS FULL	ACQUISITIONS PARTIAL (SQ FT)	WALL EASEMENT (SQ FT)	TCE (SQ FT)
89	020-482-07	X			
90	020-482-08	X			
91	020-482-09	X			
92	020-482-10	X			
93	020-482-11	X			
94	020-482-12	X			
95	020-482-13	X			
96	020-482-14	X			
97	020-482-15	X			
98	020-482-16	X			
99	020-482-17	X			
100	020-482-18	X			
101	020-482-19	X			
102	020-482-20	X			
103	020-482-21	X			
104	020-482-22	X			
105	020-482-23	X			
106	020-482-24	X			
107	020-482-25	X			
108	020-482-26	X			
109	020-482-27	X			
110	020-482-28	X			
111	020-482-29			393	366
112	020-482-30			333	370

RIGHT-OF-WAY REQUIREMENTS

#	APN	ACQUISITIONS FULL	ACQUISITIONS PARTIAL (SQ FT)	WALL EASEMENT (SQ FT)	TCE (SQ FT)
113	020-522-02	X			
114	020-522-03	X			
115	020-522-04	X			
116	020-522-05		747		
117	020-522-09	X			
118	020-524-06		32	87	69
119	020-524-07	X			
120	020-524-08	X			
121	020-524-09	X			
122	020-524-10	X			
123	020-524-11	X			
124	020-524-12	X			
125	020-524-16		57		488
126	020-524-17	X			
127	020-524-18	X			
128	020-524-19	X			
129	020-524-20	X			
130	020-524-21	X			
131	020-524-24	X			
132	020-524-25	X			
133	020-524-26	X			
134	020-524-28	X			
135	020-524-29	X			
136	020-295-03	X			



ALTERNATIVE B
RIGHT-OF-WAY REQUIREMENTS

SCALE: 1" = 200'

10

RIGHT-OF-WAY REQUIREMENTS

#	APN	ACQUISITIONS FULL	ACQUISITIONS PARTIAL (SQ FT)	WALL EASEMENT (SQ FT)	TCE (SQ FT)
137	020-471-17			49	91
138	020-471-16			483	531
139	020-471-15			360	400
140	020-471-14			324	360

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Ker	58 99	T31.7/R55.6 21.2/26.2	10	

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. — EXP. — CIVIL — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

PARSONS
110 WEST A STREET, SUITE 1050
SAN DIEGO, CALIFORNIA 92101

THOMAS ROAD IMPROVEMENT PROGRAM
900 TRUXTUN AVENUE, SUITE 200
BAKERSFIELD, CALIFORNIA 93301

REVISED BY	DATE REVISED

DESIGNED BY	CALCULATED-
CHECKED BY	

CONSULTANT FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

BORDER LAST REVISED 7/2/2010

USERNAME => &USER
DGN FILE => &REQUEST

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE EA 06-48460

LAST REVISION 05-19-15

DATE PLOTTED => &DATE
TIME PLOTTED => &TIME